KOROLEV, A.A., kandidat tekhnicheskikh nauk.

Investigation of efficient cross section forms for metal beams. (MLRA 10:3)
Izv. VNIIG no.39:121-137 '49.
(Girders)

[redacted], A. A., [redacted], L. D., [redacted], I. Ya.,

Bearings (Machinery)

"Rolling contact bearings, " B. D. Zeyzel'man, B. V. Tsypkin. Reviewed by L. D. Chascvnikov, I. Ya. Al'shits, A. A. Korolev. Vest. mash., 32, No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. Unclassified.

KOROLEV, A.A.

KOROLEV, A. A.

Novye issledovaniia deformatsii metalla pri prokatke [New studies on the deformation of metal in rolling] Mashgiz, 1953. 268 p.

SO: Monthly List of Russian Accessions. Vol. 6 No. 7 October, 1953.

KOROLEV, A. A.

Mekhanicheskoye oborudovaniye prokatnykh tsekhov (Mechanical equipment of rolling mills, by) A. A. Korolev (i) G. M. Nikolayevskiy. Moskva, Metallurgizdat, 1953.
439 p. Illus., Diagrs., Tables.
"Literatura": P. (440)

SO: N/5
741.474
.K8

1. KOROLEV, A., KUZNETSOV, N.

2. USSR (600)

4. Metals

7. Work in the field of metal economy. A. Korolev, N. Kuznetsov. Za ekon. mat., No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

KOROLEV, A.A., kand.tekhn.nauk; BRUMBERG, R.M., inzh.

Studying experimental data on the distribution of unit pressure along the arc of gripping in the rolling process. Obr.met.davl. no.2:132-146 '53. (MIRA 12:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya.
(Rolling mills)

KOROLEV, N.N.

ABANOV, L.V.; AL'SHITS, I.Ya.; BERDICHEVSKIY, Ya.G.; KODNIR, D.S.; UMNYAGIN, M.G.; USTYUZHANINOV, M.I.; KOROLEV, A.A., kandidat tekhnicheskikh nauk, redaktor; POPOVA, S.M., tekhnicheskiy redaktor

[Liquid friction bearings for rolling mills] Podshipniki zhidkostnogo treniia prokatnykh stanov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 195 p. (MLRA 8:6)
(Bearings (Machinery))

KOROLEV, A.A., kandidat tekhnicheskikh nauk; KOGOS, A.M.; TOKARSKIY, A.P., [illegible], V.V. GUREVICH, A.Ye., SHVARTSMAN, V.F.; KARPOV, V.F.; SHUL'MAN, P.G.; ADAMOVICH, N.K.; CHETYRBOK, P.M.; TSELIKOV, A.I., KUZ'MIN, A.D., kandidat tekhnicheskikh nauk; TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[Blooming mill 1000] Bliuming 1000. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 271 p. (MLRA 8:8)

1. Chlen-korrespondent AN SSSR (for TSelikov)
(Rolling mills)

BUR'YANOV, V.F.' ANTSYFEROV, I.K., inzhener,

"The 1000 blooming mill." A. A. Korolev and others. Reviewed by V. F. Bur'ianov. Stal' 16 no.9:863 S '56. (MLRA 9:11)

1. Vsesoyuznyy zaochnyy politekhnicheskiy institut (for Bur'yanov).
2. Ministerstvo chernoy metallurgii SSSR (for Antsyferov).
(Rolling mills) (Korolev, A. A.)

124-57-1-925

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 128 (USSR)

AUTHOR: Korolev, A. A.

TITLE: New Formulas for the Determination of the Pressure Exerted by the Metal on the Rolls During Hot Rolling (Novyye formuly dlya opredeleniya davleniya metalla na valki pri goryachey prokatke)

PERIODICAL: V sb.: Prokatnyye stany i tekhnologiya prokatki. Moscow, Mashgiz, 1955, pp 167-182

ABSTRACT: Assuming the existence of a zone of adhesion, the author obtains a single differential equation for the specific pressures instead of the two equations obtained previously under the assumption of the existence of two zones of deformations and a sudden change, along the boundary between these two zones, of the frictional contact forces $t_x = \mu p_x$, where μ is the friction coefficient and p_x is the specific pressure. Therein it is assumed, on the basis of experimental evidence, that $t_x = t_1 (1-x / \ell)$, where t_1 is the frictional contact force at the exit section of the metal from between the rolls, and ℓ_H (sic!) is the coordinate of the neutral section. New formulas are obtained for the mean (along the arc of engagement) and the maximal deformation velocity. 1. Rolling mills--Rolling pressure N. S. Kurdin

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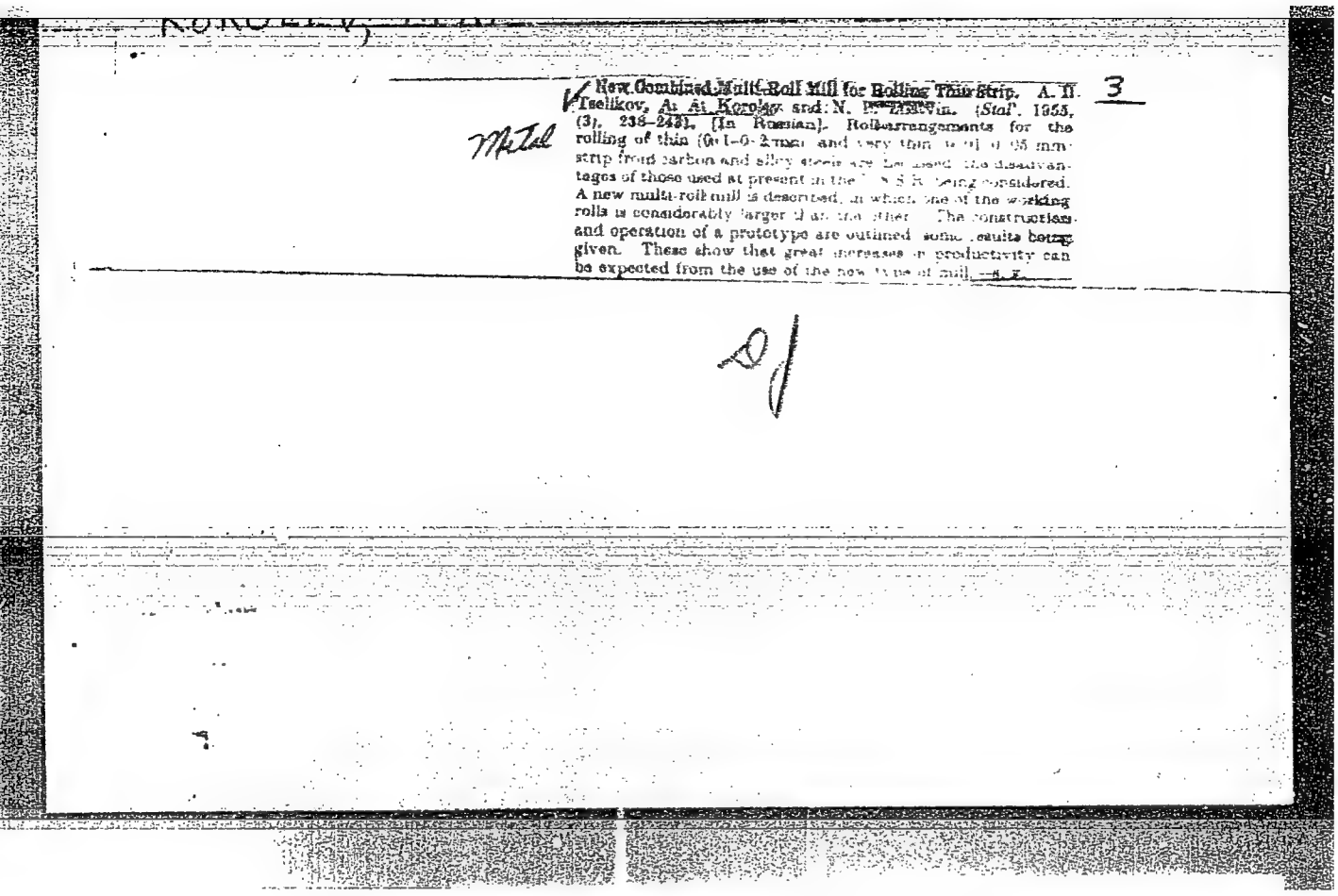

New Combined Multi-Roll Mill for Rolling Thin Strip. A. I. Tselikov, A. Ai. Korolev and N. P. [illegible]. (*Stal'*, 1955, (3), 238–243). [In Russian]. Roll-arrangements for the rolling of thin (0·1–0·2 mm.) and very thin (0·01–0·05 mm.) strip from carbon and alloy steels are discussed, the disadvantages of those used at present in the U.S.S.R. being considered. A new multi-roll mill is described, in which one of the working rolls is considerably larger than the other. The construction and operation of a prototype are outlined, some results being given. These show that great increases in productivity can be expected from the use of the new type of mill.—A. F.

3

MTal

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KOROLEV, A.A., kandidat tekhnicheskikh nauk.

New formulas for the determination of pressure exerted by rolls on the metal in hot rolling. [Trudy] MVTU no.62:167-182 '55. (MLRA 9:7)
(Rolling (Metalwork))

Moscow Higher Technical School
im. Bauman

KOROLEV A.A.

TSELIKOV, A.I.; KOROLEV, A.A., kand. tekhn. nauk; TRET'YAKOV, A.V., kand. tekhn. nauk.

New combined multiple roll mill for rolling thin strips. [Trudy] TSNIITMASH 73:5-28 '55. (MIRA 11:3)

1. Chlen-korrespondent AN SSSR (for TSelikov).
(Rolling mills)

KOROLEV, A.A., kand. tekhn. nauk.

Determining the pressure of metals on rolls of rolling mills taking the adhesion area into consideration. [Trudy] TSNIITMASH 73:179-201 '55. (MIRA 11:3)

(Rolling (Metalwork))

KOROLEV, A.A.

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Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya

Prokatnyye stany: issledovaniya, raschet, konstruktsiya i osvoyeniye, vyp. 8 (Rolling Mills; Studies, Calculation, Design and Operation, No. 8) Moscow, Mashgiz, 1956. 258 p. (Its: /Trudy/ kn. 83) 3,800 copies printed.

Ed.: Korolev, A.A., Candidate of Tech. Sciences; Editing of material on heavy machine building headed by: Golovin, S. Ya., Engineer. Tech. eds.: Tikhonov, A. Ya. and Matveyeva, Ye. N.; Corrector: Chudakov, I.B.

PURPOSE: This collection of articles is intended for rolling-mill designers, process engineers, scientists and instructors.

COVERAGE: This collection contains 19 articles on research and tests conducted by TsKBMM TsNIITMASH in 1945-1955. Results of the latest experiments conducted in the field of new rolling techniques are described. Also, results are quoted of theoretical and experimental work done in order to determine amount of power required for rolling blooms, strips, car wheels and turbine-disc wheels. Articles by A.I. Tselikov and others describe the new TsKBMM design for 12-roll mills (built by TsNIITMASh), installed in a number of factories and successfully used

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Rolling Mills; Studies, Calculation, Design and Operation (Cont.) 227

for rolling thin and extra-thin strips. V.F. Moseyev describes in his article a new arrangement for multiple rolling mills which allows continuous rolling at high speeds (up to 25 m/sec) and achieves a considerable increase in output. Articles by Turkin, D.S.; Pobedin, I.S.; Khrapov, M.M.; Korolev, A.A., and Baranov, N.M. eleborate on some basic technological problems of rolling and on the determination of basic characteristics in rolling wide-flange shapes in experimental rolling mills. These problems are of timely interest in connection with the construction by the UZTM of mills for rolling wide-flange shapes (up to 1000 mm). Articles by Pobedin, I.S.; Baykov, V.I. and Drozd, V.G. describe a new 12-stand continuous cold-rolling mill for thin wire (to 1.8 mm diameter). Results of the application of this new process are also given. Articles by Korolev, A.A. and Tret'yakov, A.V., quote results of research on and use of the new combination multiple-roll mill used in the "Hammer and Sickle" plant for rolling thin strip steel. Articles by Rokotyan, Ye.S., Meyerovich, I.M. and others describe results of experiments conducted on blooming, cold-rolling, duralumin-dressing, and car wheel rolling mills. Articles by Anisifirov, V.M.; Korolev, A.A.; Morozov, B.A.; Polezhayev, A.A., and Lavrov, A.A. give the results of research in the fields of durability and efficiency of metallurgical machinery. There are 57 references, of which 52 are Soviet, 3 USA, 2 German.

Card 2/6

KOROLEV, A. A.

Twelve-Roll Mills for Rolling [illegible]. A. Korolev, A. D. Kuz'min, [illegible]. Stal', 1956, (6), 531-538. (In Russian) [illegible] tive, design and performance of a [illegible] rolling thin and very thin [illegible] are described. Results are [illegible] these mills is envisaged. [illegible]

Cent Sci Res Inst Technol & Machine Building

SOV/137-57-10-19072

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 92 (USSR)

AUTHOR: Tselikov, A.I., Korolev, A.A., Kuz'min, A.D., Kogos, A.M., Solov'yev, P.I.

TITLE: Cluster-type Rolling Mills Designed by the TsKBMM of the TsNIITMASh (Mnogovalkovyye stany konstruktsii TSKBMM TsNIITMASh)

PERIODICAL: V sb.: Prokatn. stany: Nr 8. Moscow, Mashgiz, 1956, pp 5-26

ABSTRACT: A 12-roll cluster-type mill for the rolling of thin (down to 0.1-mm) and fine (down to 0.05-mm) strip has been designed by the TsKBMM of TsNIITMASh. The mill has a roll and a pinion stand, coilers ahead and behind, and a tapered uncoiler. The roll stand consists of a parallelepipedal cast-iron housing containing a cylindrical bored hole for the roll (R) adapter and two rectangular openings on the sides for the guides. Upper and lower adapters carry three R each and three shafts with four back-up rolls (BR). Of the three R in each adapter, one is of 38 mm diameter and 350 mm body length, and is a working roll, the other two 45-mm are driven intermediate rolls transmitting

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Cluster-type Rolling Mills Designed by the TsKBMM of the TsNIITMASh

pressure from the working R to the 110-mm diam BR. The latter are mounted without play in the adapter chocks, the upper driving and working R being suspended from the upper chock by springs, so that they are alwys compressed against each other and toward the BR, while the bottom chock lies free in the bottom portion of the housing. The pinion stand represents a combination of types. The mill-stand motor is of 100-kw power and runs at 980-1150 rpm. The mill R are of Nr 12KhN2A steel, the H_{sh} of the working surface being 100-105; the driving rolls are of Nr 20KhN3A steel, with an H_{sh} 95-100; the BR are of Nr 9Kh steel. The rolling rate is 1-5 m sec, and the maximum permissible rolling pressure is 35,000 kg. The working and back-up R have circulating lubrication, machine oil being used. The coilers are located on both sides of the mill stand and make it possible to roll with tension both in front and behind. The maximum tension on the strip is 3600 kg, and the diameter of the coiling drum is 300 mm. The coiler motors are of 81.6 hp each. The weight of the mill is 25 t. The following is the rolling flowsheet. Annealed and pickled coils, 0.2-0.5 mm thick and up to 300 mm wide, of steels 0.8, U7A to U12A, EI142, 20S2, 65G, 50KhFA, and others, are delivered to a conical uncoiler and are mounted thereon by a lift table. The end of the strip goes from the uncoiler through the mill R and is fastened to the drum of the rear coiler. The strip is then placed under tension and the

Cluster-type Rolling Mills Designed by the TsKBMM of the TsNIITMASh

rolling rate is increased to the desired level. Before the end of the coil leaves the uncoiler the stand and coiler are switched to servicing speed, and the mill is stopped and reverses itself. The end of the strip is guided into the front coiler and a second pass begins, during which back tension on the strip is provided by switching the coiler motor to generator operation. Rolling continues until 2 or 3 coils are left on the drum of the rear coiler, whereupon the motors are switched to minimum speed, stopped, and reversed for the next pass, etc. The coil of finished strip is taken from the coiler by a special knock-out and is delivered for trimming of the side edges or annealing. 237-mm wide strip of Kh0.5 steel is rolled from 0.37 to 0.105 mm in 6 passes with an 8.7-23% reduction per pass and a single intermediate anneal, R adapters on roller bearings being used. The precision of rolling, based on thickness, for strip not over 0.10 mm thick, is within a tolerance of ±0.005 mm. The average output of the mill is 3.0-3.5 t thin strip per shift.

V.Zh.

SOV/124-58-3-3466

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 126 (USSR)

AUTHORS: Khrapov, M. M., Korolev, A. A., Pobedin, I. S. Prikhod'ko, I. F.

TITLE: Experimental Investigation of Force Parameters During the Rolling of Models of Wide-flanged Beams (Eksperimental'noye issledovaniye silovykh parametrov pri prokatke modeley shirokopolochnykh balok)

PERIODICAL: V sb.: Prokatn. stany. Nr 8. Moscow, Mashgiz, 1956, pp 38-54

ABSTRACT: Total and specific pressures as well as the torque required in the rolling of shaped products consisting of wide-flanged beams measuring 75x75 mm were measured on the laboratory mill TsKBMM-23 at the TsNIITMash (Central Scientific Research Institute of Technology and Machinery). Carbon pressure sensors were employed in the measurements. The results of the measurements are substantially at variance with calculated data (ref. V sb.: Prokatn. stany. Nr 8, Moscow, Mashgiz, 1956).

K. N. Shevchenko

Card 1/1

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SOV/124-58-3-3254

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 103 (USSR)

AUTHOR: Korolev, A. A.

TITLE: Variation of Yield Strength of Metal Along the Arc of Contact During Roll Working (Izmeneniye predela tekuchesti metalla po duge zakhvata valka pri prokatke)

PERIODICAL: V sb.: Prokatn. stany. Nr 8, Moscow, Mashgiz, 1956, pp 217-224

ABSTRACT: In the first part the author confirms the earlier known fact of the increase in yield strength of a strip after leaving the rolls as compared to its strength before entering the roll due to the effect of work-hardening. In the second half the author maintains that hot-rolling treatment decreases the yield strength along the arc of roll contact owing to the decrease in the strain rate between the entry and the exit of the strip from under the rolls. In the opinion of the reviewer the author's statement is incorrect even if only because the strain rate decreases along the arc of the roll contact toward the exit of the strip during cold-rolling as well, while the yield strength increases in that case.

K. N. Shevchenko

Card 1/1

KOROLEV, A.A., kandidat tekhnicheskikh nauk

Proof of the existence of adhesion zones and calculations related to the forward flow caused by these zones. [Trudy] TSNIITMASH no.78:221-225 '56. (MLRA 10:1)
(Deformations (Mechanics)) (Rolling (Metalwork))

KOROLEV, A.A., kandidat tekhnicheskikh nauk.

Distribution of contact friction forces in the deformation zone. [Trudy] TSNIITMASH no.78:226-231 '56. (MLRA 10:1)
(Deformations (Mechanics)) (Friction)

KOROLEV, A. A.

RUVINSKIY, Semen Mikhaylovich; STARETS, Iosif Semoylovich; KOROLEV, A.A., kandidat tekhnicheskikh nauk, redaktor; VAGIN, A.A., inzhener, redaktor izdatel'stva; ATTOPOVICH, M.K., tekhnicheskiy redaktor

[Improving friction points of rolling mills] Modernizatsiia uslov treniia prokatnykh stanov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 189 p. (MLRA 10:9)
(Rolling mills) (Bearings)

SOV/137-58-7-14729

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 111 (USSR)

AUTHOR: Korolev, A.A.

TITLE: Elastic-plastic Bending of Strip in Straightening on a Multiple-roll Straightening Machine (Uprugo-plasticheskiy izgib polosy pri pravke yeye na mnogorolikovoy mashine)

PERIODICAL: V sb.: Prokatn. stany i tekhnol. prokatki (MVTU, 80). Moscow, Mashgiz, 1957, pp 57-76

ABSTRACT: Examination is made of theoretical questions relative to the bending of strip during straightening (S) on a multiple-roll machine, and the fundamental parameters requiring calculation (pressure on the rolls (R) and S power) in order to build such machines. The bending moments (M) required to S the strip are determined with consideration of 3 cases of distribution of internal stresses: a) in elastic bending the required M is proportional to the square of the thickness of the strip, b) in plastic bending M is 50% larger than M in elastic bending, and, c) in elastic-plastic bending M consists of 2 components corresponding to the elastic and plastic portions of the zone of deformation (D). To determine the depth of the zone of plastic D, a

Card 1/2

Elastic-plastic Bending of Strip (cont.)

coefficient of penetration of a plastic D into the thickness of the sheet is suggested. The nature of the change in the coefficient from the second to the penultimate R is expressed by a hyperbolic curve. These bending M make it possible to determine the pressure of the strip on the R. The torque M required to drive the R is composed of the torque M due to the elastic and plastic D of the strip, and the torque M required to overcome the forces of friction in the R bearings. The torque M due to the elastic and plastic D are determined from the work of D of the plastic and elastic zones of a cross section of the strip, with allowance for the spacing and the diameter of the R. The quality of the S is determined primarily by the spacing and diameter of the working R of the straightening machine. For reasons of design, the R diameter is usually $\leq$ 90% of the spacing. The M of the forces of friction arising between R and strip are proportional to the pressure of the metal on the rolls. Losses to rolling and sliding friction are allowed for in the coefficient of rolling friction and are taken to be 0.1 mm in S steel sheets and 0.2 mm for Cu and Al. The M of friction in the R supports is also proportional to the pressure. The coefficient of friction for sliding bearings with good lubrication, it is suggested, should be 0.07-0.09, while for roller bearings it should be 0.003-0.01. After calculation of the torque on the R, the power needed by the straightening machine motor is calculated. 1. Metals--Mechanical properties Card 2/2 2. Metals--Deformation 3. Rolling mills--Performance A.N.

137-58-4-7053

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 107 (USSR)

AUTHOR: Korolev, A. A.

TITLE: A Method of Determining Design Parameters for Roller Levelers (Metodika opredeleniya raschetnykh parametrov pravil'nykh mashin)

PERIODICAL: Sb. tr. Mosk. vech. metallurg. in-t, 1957, Nr 2, pp 116-148

ABSTRACT: A method for analysis of the parameters of sheet-and-section roller levelers is presented. The main parameters for sheet-levelers are the body length l, diameter d, and pitch t of the rollers (R), and also the thickness s and width b of the sheets. It is shown that the smaller the s, the smaller the d and t must be (t=1.05-1.1d); the greater the σ_s of the material being leveled, the smaller the t and the greater the number of R (n =17-29). An equation is derived to determine the pressure P of the metal on the R of the leveler, based on the conditions of elastic-plastic flexure of the strip. The boundaries between the elastic and plastic zones are found at a distance of $z=(\sigma_s/E)(\rho_1 \cdot \rho_2)/(\rho_1+\rho_2)$ from the neutral layer, where ρ_2 is the radius of the required

Card 1/2

137-58-4-7053

A Method of Determining Design Parameters for Roller Levelers

curvature of the strip to correct its initial curvature of radius ρ_1. To simplify the analysis, a coefficient of penetration of plastic deformation (D), $k_{pl}=1-2z/s$, is introduced, and this comes to 0.9-0.95 in a sheet when $z=mR$, diminishing from the second to the penultimate R in accordance with the curve $k_{pl}=2/i$ and equal to 0 at the final R (i is the number of the roller). The pressure is determined by the equation $P=\sigma_s b \cdot s^2 c_p/t$, where $c_p=f(k_{pl})$. Equations are derived to determine the torque moment (M) required to drive an R. This consists of the M expended on plastic D of the metal in leveling, the M expended upon the elastic D of the strip, the M expended upon overcoming the force of rolling friction of the R over the strip, and the M expended upon overcoming the friction in the bearings. The values of all the required coefficients are presented in tables. The M are employed to determine the power of the motor required for the roller leveler. Analogous derivations of equations for determining the major parameters of merchant levelers are presented. Two examples of employment of the equations derived are presented.

M. Z.

1. Rolls--Leveling apparatus--Design

Card 2/2

137-58-4-6995

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 98 (USSR)

AUTHOR: Korolev, A. A.

TITLE: New Formulas for Determining Forward Slip and Spread in Rolling (Novyye formuly dlya opredeleniya operezheniya i ushireniya pri prokatke)

PERIODICAL: Sb. tr. Mosk. vech. metallurg. in-t, 1957, Nr 2, pp 279-293

ABSTRACT: A theoretical analysis of the rolling spread (S) equation suggested by Bakhtinov is used to advance a new formula for S determination, take into consideration the effect of the width of strip: $\beta = b_1/b_0 = 1/1 - \varepsilon (1+S_1) [R \gamma / b_0]$, in which β is the S factor; b_0 and b_1 are the starting and terminal widths of the strip; ε is the relative reduction; R is the radius of the rolls; γ is the neutral angle; S_1 is the forward slip with consideration of S, for the determination of which the following formula is derived: $S_1 = (R/h_1) \gamma^2 (1 - R\gamma/b_1)$. An example of calculation of forward slip and S in the rolling of steel strip is presented.

Yu. F.

Card 1/1 1. Rolling mills operation--Theoretical analysis

122-4-1/29

AUTHOR: Korolev, A.A., Candidate of Technical Sciences.

TITLE: The working principles and design of planetary rolling mills. (Printsipy raboty i rascheta planetarnykh stanov.)

PERIODICAL: "Vestnik Mashinostroeniya" (Engineering Journal), 1957, No.4, pp. 3 - 9 (U.S.S.R.)

ABSTRACT: The kinematics of roller motion and metal flow in planetary type rolling mills is examined by means of elementary geometric analysis. The high rate of engagement of roll pairs, up to 100 per second, makes it possible to combine a small deformation with a high degree of total reduction. The reduction factor can reach 20 and so replace up to 15 passes on an ordinary rolling mill. The number of planetary rolls in the deformation zone is shown as an important design consideration. The thickness of the original slab and its forming are related to the geometry of the rolls. The ratio of the diameters of the supporting roller and the planetary rolls is discussed. The time during which the metal is in the deformation zone is computed, the kinematics of the planetary roll motion is considered in relation to the presence of slipping between the rolls and the metal. The metal pressure in rolling is computed, 1/2 assuming a specific pressure of 10 kg/mm^2 at a rolling temperature of 1 000 °C. The output of the mill is given in an

(Cont.)

122-4-1/29

analytical formula. The analysis, though original, is not based on any experimental data. Planetary rolling mills are 2/2 in the design stage in the U.S.S.R.

There are 6 figures and 6 non-Slavic references.

AVAILABLE:

9(4)

SOV/112-59-1-1525

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 1, p 213 (USSR)

AUTHOR: Koroley, A. A., Volfson, N. M., Levina, A. S., and Sokolov, V. S.

TITLE: Remodeling Gas Rotary-Hearth Furnaces for Annealling the Press Mounts of Receiving Tubes

PERIODICAL: Radiotekhn. proiz-vo, 1957, Nr 10, p 55

ABSTRACT: A rotary-hearth furnace has been designed for high-quality annealling of tube mounts. The furnace has 90 cast-iron "pockets;" 6 of them are heated by three pairs of opposing flat-flame burners, 72 pockets are in a tunnel (without heating), and 12 pockets are open on the top. The annealling time is 14 min, and output temperature, 140-150°C. The process consists of holding the mount at the highest temperature, gradually reducing the temperature in the annealling zone, and cooling. One of the pockets is equipped with a thermocouple that moves along with the mounts. To facilitate repairs, the tunnel is detachable.

O.K.R.

Card 1/1

Korolev, A.N.

KOROLEV, A.N., kandidat tekhnicheskikh nauk.

New trends in the machinery industry in West Germany. Vest.mash. 37 no.7:77-82 S '57. (MLRA 10:9)
(Germany, West--Machinery industry)
(Hannover--Machinery--Exhibitions)

KOROLEV, A.A.

124-11-13080

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr. 11, p. 115 (USSR)

AUTHOR: Korolev, A. A.

TITLE: Investigation of the Stability of a Plate of a Variable Thickness in the Presence of Tangential Stresses. (Issledovaniye ustoychivosti plastinki peremennoy tolshchiny pri vozdeystvii kasatel'nykh napryazheniy.)

PERIODICAL: Izv. Vses. n.-i. in-ta gidrotekhn., 1957, Nr 57, pp 112-128

ABSTRACT: Study of the problem of the stability of a plate which, along its width, consists of three portions: a central portion of constant thickness and two side portions in which the thickness varies according to a cosh law. The problem is solved by an energy method.

(A. A. Kurdyumov)

Card 1/1

KOROLEV, A.A., kand.tekhn.nauk

Elastic-plastic bending of strip during straightening in a multiroll mill. [Trudy] MVTU no.80:57-76 '57. (MIRA 10:12)
(Rolling (Metalwork))

Korolev, A.A.

25(1) PHASE I BOOK EXPLOITATION SOV/1888

Moscow. Vyssheye tekhnicheskoye uchilishche

Prokatnyye stany i tekhnologiya prokatki; sbornik statey (Rolling Mills and Processing by Rolling; Collection of Articles) Moscow, Mashgiz, 1958. [illegible] p. (Series: Its: [Trudy] 84) Errata slip inserted. 3,000 copies printed.

Ed.: A.I. Tselikov, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: L.A. Osipova; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S.Ya. Golovin, Engineer.

PURPOSE: This collection of articles is intended for workers of scientific-research institutes and plants, teachers, aspirants, and students specializing in the field of rolling mill engineering.

COVERAGE: This book is composed of theoretical and experimental works and proceedings presented at MVTU imeni Baumana (Moscow Higher Technical School imeni N.Ye. Bauman) by the Department of Machinery and Processes of Rolling and Drawing. It covers the theory of rolling and manufacturing methods described as new. The articles deal with the problem of determining forces in a planetary mill, the study of the process of metal deformation on plain and shaped rolls, continuous cold rolling of pipe, and methods of selecting tools and fixtures for new mills. No personalities are mentioned. References follow each article.

Korolev, A.A., Candidate of Technical Sciences. Consideration of Elastic Flattening of Rolls Along the Contact Arc in Determining Pressure of the Work on Rolls During Rolling 94

The author describes the method of determining the pressure of the work

Rolling Mills and Processing (Cont.) SOV/1888

on rolls, with consideration being given to the elastic flattening of rolls.

[illegible], V.A., Candidate of Technical Sciences, and Yu.A. Zamyrich - [illegible], Engineer. Basic Parameters of the Tools of Mills for Rolling Periodic Shapes 106

The author discusses the basic types of rolls for three-roll periodic shape rolling mills, giving recommendations for selecting wear-resistant material for tools and a graphic method for designing trecure for new mills.

Grishkov, A.I., Engineer. Investigation of Spreading During Rolling in Plain Rolls 118

Grishkov, A.I., Engineer. Dependence of the Average Unit Pressure and the Width of a Strip During Hot Rolling in Plain Rolls 172

In this article and the preceding one the author deals with problems connected with the theory of spreading and derives related equations. He also presents experimental material on the effect of strip width on spreading and average unit pressure, thus confirming the theory of spreading developed by A.I. Tselikov.

Rolling Mills and Processing (Cont.) SOV/1888

Burdin, V.M., Engineer. Cold Rolling of Thin-walled Steel Tubes on a Long Mandrel 185

The author presents the results of an investigation concerned with the cold rolling of tubes on a long mandrel. 16,33, and 38 mm. carbon steel tubes, and 15 and 16 mm. stainless steel tubes with various ratios of diameter to wall thickness were rolled in the same stand, while 16 mm. tubes were rolled continuously in six stands. Pass design is described; reduction regimes for various tube sizes are determined; and the results of an investigation on the selection of material for rolls and mandrels are presented.

6

KOROLEV, Andrey Andreyevich, kand.tekhn.nauk; OSIPOVA, L.A., inzh., red.; MIL'KIND, V.D., tekhn.red.

[Rolling mills used in foreign countries] Zarubezhnye prokatnye stany. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1958. 355 p. (MIRA 13:3)
(Rolling mills)

TSELIKOV, Aleksandr Ivanovich,; SMIRNOV, Viktor Viktorovich, kand. tekhn. nauk, dots.; KOROLEV, A.A., red.; SIDOROV, V.N.,inzh., red. izd-va,; ISLENT'YEVA, P.G., tekhn. red.

[Rolling mills] Prokatnye stany. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 432 p. (MIRA 11:11)

1. Chlen-korrespondent AN SSSR(for Tselikov).
(Rolling mills)

PHASE I BOOK EXPLOITATION 487

Korolev, Andrey Andreyevich, Candidate of Technical Sciences, Docent

Prokatnyye stany; konstruktsiya i raschet (Rolling Mills; Design and Calculation) Moscow, Mashgiz, 1958. 451 p. 8,000 copies printed.

Reviewers: Kuz'min, A. D., Candidate of Technical Sciences, and Dvinyaninov, S. A., Engineer; Ed.: Gromov, N. P., Candidate of Technical Sciences; Ed. of Publishing House: Osipova, L. A.; Tech. Ed.: El'kind, V. D.

PURPOSE: This book has been approved by the Administration for Secondary Special Schools of the Ministry for Higher Education, USSR, as a textbook for machine-building tecknikums, The book may also be useful as a manual for designers of rolling mill equipment and mechanics servicing this equipment.

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Rolling Mills (Cont.) 487

COVERAGE: The author presents a detailed description of modern rolling mills of domestic and foreign design. Emphasis is placed on the design and construction of continuous rolling mills. Theoretical and computational data presented in this manual are based on the material of the Tsentral'noye konstruktorskoye byuro metallurgicheskogo mashinostroyeniya - TsKBMM (Central Design Bureau for Metallurgical Machine Building). The description of designs of modern mills is based on data obtained from the Ural'skiy zavod tyazhelogo mashinostroyeniya - UZTM, (Ural Plant for Heavy Machine Building), Novokramatorsk machine building plants in Donbass and Elektrostal' (NKMZ-D and NKMZ-E), Starokramatorskiy mashinostroitel'nyy zavod - SKMZ (Starokramatorsk Machine Building Plant), etc. Diagrams and drawings of basic types of rolling mill machines and mechanisms are included. There are 15 Soviet references. No personalities are mentioned.

Card 2/12

S/123/59/000/09/30/036
A002/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 9, p. 199, # 34354

AUTHOR: Korolev, A. A.

TITLE: Casting Gears by the Method of Precision Casting

PERIODICAL: V sb.: Za novuyu tekhn. i progressivn. tekhnol., Minsk, Gos. izd-vo BSSR, 1958, pp. 244-248

TEXT: At MTZ, efforts were made to manufacture gears by casting with dispensable patterns. The press-mold, which is to be obtained from a "Б-83" (B-83) grade babbit casting, has a split steel housing. It is possible to cast 4-6 parts in one mold. Experimental castings of planetary gears of "18ХГТ" (18KhGT) steel showed that a 4-5 precision class of cast tooth surfaces can be obtained. The amount of rolled stock spent for manufacturing each planetary gear is 2.4 kg, while the casting has a weight of 1.05 kg at 0.92 kg weight of the finished part. When changing over from using rolled stock to casting, the labor consumption for manufacturing one planetary gear is reduced by 16 minutes.

Card 1/2

A002/A001

Casting Gears by the Method of Precision Casting

A poor quality of marshallite, used as a molding material, has a negative influence on the surface quality of the cast part. For this reason, teeth are cast with a 1.4-1.5-mm thick tolerance. There are 2 figures.

T. A. P.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

KOROLEV, A.A., dots., kand.tekhn.nauk

Theoretical investigation of the straightening process on a plate-straightening machine. Izv.vys. ucheb.zav.; chern.met no.9:141-153 S '58. (MIRA 11:11)

1. Moskovskiy vecherniy metallurgicheskiy institut.
(Plates, Iron and steel) (Metalworking machinery)

SOV/137-58-7-14260

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 44 (USSR)

AUTHORS: Tselikov, A., Andreyev, V., Korolev, A. A.

TITLE: What's New at the British Metallurgical Plants? (Na metallurgicheskikh zavodakh Anglii)

PERIODICAL: Prom-ekon. gaz., 1958, 21 fevr., Nr 23, p 4

ABSTRACT: Bibliographic entry

1. Industrial plants--Gt. Brit. 2. Industrial plants--Development

Card 1/1

KOROLEV, A.A.

122-2-27/33

AUTHORS: Tselikov, A.I., Corresponding Member of the Ac.Sc. USSR, Professor, and Korolev, A.A., Candidate of Technical Sciences.

TITLE: New Rolling Mill Equipment in England (Novye prokatnyye stany Anglii)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, No.2, pp. 73-79 (USSR)

ABSTRACT: In August and September, 1957, the editorial offices of "Vestnik Mashinostroyeniya" were visited by the assistant editor of the English journal, "Engineering" - Mr. E.P. Ward. After returning to England, Mr. Ward published in his journal a series of articles, six of which under the general heading, "What is the Quality of Soviet Engineers?", were published in October and November, 1957. The editorial offices of "Engineering" in London received a return visit, namely, the assistant editor, Candidate of Technical Sciences A.A. Korolev, and a member of the editorial board, Corresponding Member of the Ac.Sc. USSR, Professor A.I. Tselikov. After terminating the visit of the Russian representatives at the editorial offices of "Engineering" a meeting was held with Mr. Roberts. Both sides expressed their satisfaction with the visit and also the desire for closer co-operation. This is the first of a series of articles prepared by A.I. Tselikov and A.A. Korolev on the knowledge gained relating to new techniques applied in England. It deals with

Card1/2

Korolev, A.A.

TSELIKOV, A.I.; KOROLEV, A.A., kand. tekhn. nauk.

Modern rolling mills in England. Vest. mash. 38 no.3:72-77 Mr '58.
(MIRA 11:2)

1. Chlen-korrespondent AN SSSR (for TSelikov).
(England--Rolling mills)

SOV/122-58-6-32/37

AUTHOR: Korolev, A.A., Candidate of Technical Sciences

TITLE: Development Prospects for the Manufacture of Metallurgical Equipment (O perspektivakh razvitiya metallurgicheskogo mashinostroyeniya)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 6, pp 80-82 (USSR)

ABSTRACT: A branch conference on metallurgical engineering plant, convened at the Uralmashzavod in Sverdlovsk by the Otdel mashinostroyeniya Gosplana (Mechanical Engineering Division of the State Planning Commission of the USSR) is reported. 400 delegates representing 22 economic councils, 14 research institutes, 24 design institutes and 29 metallurgical equipment manufacturing plants were present (including the Uralmashzavod, the Novo-Kramatorskiy zavod (Novo-Kramatorskiy Works), Staro-Kramatorskiy mashinostroitel'niy zavod (Staro-Kramatorskiy Plant), Elektrostal'skiy zavod tyazhelogo mashinostroyeniya (Elektrostal' Plant), the Yuzhno-Ural'skiy zavod tyazhelogo mashinostroyeniya (Yuzhno-Ural'skiy Plant), the Irkutskiy mashinostroitel'nyy zavod (Irkutsk Plant), the Novosibirskiy mashinostroitel'niy zavod (Novosibirsk Plant)) as well as 16 steel Works (including the Magnitogorskiy metallurgicheskiy kombinat, the Azovstal',

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the Zaporozhstal', the Novo-Tagilskiy Works, Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine). In his opening address, Ye.S. Novoselov, Minister of the USSR, emphasised that the State Planning Commission attached great importance to the conference. Vinogradov, K.K., deputy director of the mechanical-engineering division of the State Planning Commission, pointed out that the production of metallurgical equipment increased 16-fold in the period between 1932 and 1957. The manufacture of rolling-mill equipment increased 24-fold. Between 1951 and 1957, 27 blast furnaces, 57 open-hearth furnaces, 35 rolling and tube mills were built and erected and 22 rolling mills were completed, awaiting erection. This equipment was responsible for an increase of 18.2 million tons of pig iron, 24.9 million tons of steel and 19.3 million tons of rolled products. An improvement in quality and a rise in productivity have taken place. During the period between 1959 and 1965, the manufacturers have the task of constructing powerful blast furnaces of 1 719 m^3 and even 2 286 m^3 capacity, the largest in the world. New designs of automatic skip hoists, weighing carriages, charging

machines, spout-closure guns and others must be developed. New charging machines for steel melting plant with a load capacity of 15 tons, powerful ladle cranes, converters and other equipment should be designed. A great increase in quantity of rolling-mill equipment is foreseen. Completely mechanised and largely automated rolling mills are planned, primarily sheet mills, rolled section mills and tube mills with continuous rolling, mills for the production of bent profiles and recurrent sections. Several powerful blooming and slabbing mills with an output of 3.5-4.5 million tons each must be erected and several continuous rolling mills for plate, sections, sheet and tubes. The task set is the production of over 100 million tons of steel per annum by 1972. The two chairmen of the State Planning Commissions of the Russian and Ukrainian Republics, I.Z. Shlykov and V.A. Yanchilin, reported on the planned specialisation among metallurgical equipment manufacturing plants and urged co-operation between constructors. Tselikov, A.I., Corresponding Member of the Ac.Sc.USSR, director of the design office for metallurgical-engineering at the TsNIITMASh read a paper on the basic trends of technical development and

research foreseen between 1959-1965. A relative increase in the proportion of sheet among rolled products is envisaged. Special attention must be devoted to the construction of sheet mills, particularly those with a roll length of 1 700 - 2 100 mm. A sharp increase (3-4-fold) in the production of welded tubes for gas and oil pipe lines is needed and hence the manufacture of many new tube welding machines. Sections, sheet and thin-walled tubes of heat-resisting steels, titanium and other metals will be increasingly needed and will require new rolling mills and presses. Special products for steel economy such as "economic" sections, thin-walled and variable section tubes, rolled railway axles and cold-rolled bent profiles will require special production equipment. The manufacture of mills for the rolling of gear wheels and worms, the rolling of balls and other products will need increasing attention. These special machines will release many ordinary mills and presses and will yield much economy of metal. The need to increase the continuity of rolling processes was stressed involving the butt-welding of metals, the association of rolling mills with machines for the continuous casting of

metal and an increase in the degree of automation of rolling mills. The creation of a research institute for metallurgical equipment at Sverdlovsk based on the TsNIITMASh Branch and the "Uralmetallurgavtomatika" laboratory was urgently required. N.P. Prokhorov, A.M. Rybal'chenko, the chief specialists in the heavy-engineering division of the State Planning Commission of the USSR discussed in their paper the design and manufacturing programme of blast furnace, steel-making and rolling-mill equipment. Soviet designers have created new equipment for high-capacity, blast furnaces, open-hearth furnaces of 450 tons capacity and over, new types of blooming mills, rail-section mills, sheet mills and tube mills. This equipment is said to improve on foreign equipment in its technical and economic performance. Even greater capacities and outputs are required in the future which will call for a clear specialisation of design work at various plants. Ye.G. Osipov, chief engineer of the Giprotyazhmash, dealt with the problem of specialisation. He elucidated the large returns expected of specialisation in reducing the cost of production.

Development Prospects for the Manufacture of Metallurgical Equipment

These problems were further considered in detail in the paper delivered by Yemel'yanov, chief engineer of the Vsesoyuznyy proyektno-tekhnologicheskiy institut po tyazhe-lomu mashinostroyeniyu (All-Union Design and Production Institute for Heavy Engineering). In the papers by A.V. Istomin, director of the rolling-mill section of the Gipromez (State Institute for Metallurgical Plant Projects) and B.P. Bakhtinov, Candidate of Technical Sciences, director of the rolling-mill laboratory of the TsNIIChERMET, the development prospects of rolling-mill production in ferrous metallurgy during 1959-1965 were discussed and the concrete tasks facing equipment manufacturers in creating new rolling mills and continuous units for the finishing of rolling-mill products were established. A.D. Kuz'min, Candidate of Technical Sciences, chief engineer of the TsNIITMASh, elucidated the fundamental problems in the introduction of new techniques in rolling-mill equipment during 1959-1965, facing both his office and the production plants. Special attention was devoted to product finishing processes which hitherto have not been sufficiently mechanised either in Russia or abroad. Korolev, A.A.,

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Candidate of Technical Sciences, administering the chair of mechanical equipment in metallurgical plants at the Moscow Evening Institute for Metallurgy, reported on his impressions when visiting metallurgical and engineering plants in England, Western Germany, France and other countries, together with a group of other Soviet specialists. D.I. Berenov, Candidate of Technical Sciences, chief engineer of Uralmashzavod, V.I. Glazyrin, director of the Novo-Kramatorskiy mashinostroitel'nyy zavod (Novo-Kramatorskiy Engineering Plant), Ye.F. Dotsenko, director of the Staro-Kramatorskiy zavod (Staro-Kramatorskiy Works), N.L. Dubrovin, deputy director of the Elektrostal' Plant of heavy engineering and others reported on the technical development trends in their plants. In the papers read by the chief designers of these plants, G.L. Khimich, M.I. Shinkarenko, V.L. Shvayun, V.M. Yampol'skiy, A.B. Vernik, I.I. Dobroskok, V.M. Kolesov and others, various deficiencies in the organisation of designing metallurgical equipment and its early commissioning were indicated. Proposals were made to evolve a long-term plan for the design and construction of new rolling mills in the coming 7-10 years, to establish

Development Prospects for the Manufacture of Metallurgical Equipment

a system of mutual financial responsibility covering both the ordering and supplying organisations for maintaining schedules in designing, manufacturing and commissioning of new rolling mills, to improve co-operation with the Gipromez and its branches, to develop a system of evaluation of the degree of merit of the equipment produced, to discontinue planning the production of equipment in terms of tonnage which fails to provide an incentive for producing more economical machines, to simplify the approval procedure for machine projects, etc. A number of papers were devoted to the problems of creating and improving the main electrical drives, the regulating and automation apparatus and the problems of integrated automation in the operation of metallurgical plant, namely, the papers by **Tishchenko**, N.A., chief engineer of the central design office of the "Elektroprivod" Works, V.I. Krupovich, chief engineer of the Tyazhpromelektroproyekt, E.Yu. Gutnikov, director of the "Uralmetallurgavtomatika" laboratory, M.I. Reyfisov, department head of TsNIITMASh and A.S. Filatov, laboratory administrator, and others.

SOV/122-58-6-32/37

Development Prospects for the Manufacture of Metallurgical Equipment

Concrete suggestions were made for improving the work of research institutes and laboratories concerned with automation institutes and laboratories concerned with automation development. In the resolutions of the conference, most of the points mentioned above were taken into account.

1. Industrial plants--Equipment 2. Industrial equipment--Production

Card 9/9

KOROLEV, A.A., kand. tekhn. nauk.

Precision design of plate-straightening machines. Vest.mash. 38 no.10:23-30 O '58. (MIRA 11:11)
(Rolling mills)

PHASE I BOOK EXPLOITATION SOV/3473

Korolev, Andrey Andrevich

Mekhanicheskoye oborudovaniye prokatnykh tsekhov (Mechanical Equipment of Rolling Mill Departments) Moscow, Metallurgizdat, 1959. 495 p. Errata slip inserted. 9,800 copies printed.

Ed. of Publishing House: M.R. Lanovskaya; Tech. Ed.: V.V. Mikhaylova.

PURPOSE: This book is intended as a textbook for students in metallurgical and other schools of higher education specializing in mechanical equipment for metallurgical plants. It may also be useful to engineers in rolling departments at metallurgical plants, design bureaus and scientific research institutes.

COVERAGE: Various mechanical equipment for rail, structural shape, and pipe-rolling mills is described. Special attention is given to mechanized and automated rolling mills put into operation during recent years and those being built at Soviet metallurgical

Card 1/10

KOROLEV, A.A.; SIDOROV, P.N.

Operation of an elevator without operators. Bezop. truda v prom. 3 no.11:19-20 N '59. (MIRA 13:3)
(Elevators)

ADRIANOVA, V.P.; ANDREYEV, T.V.; ARANOVICH, M.S.; BARSKIY, B.S.; GROMOV, N.P.; GUREVICH, B.Ye.; DVORIN, S.S.; YERMOLAYEV, N.F.; ZVOLINSKIY, I.S.; KABLUKOVSKIY, A.F.; KAPELOVICH, A.P.; KASHCHENKO, D.S.; KLIMOVITSKIY, M.D.; KOLOSOV, M.I.; KOROLEV, A.A.; KOCHINEV, Ye.V.; LESKOV, A.V.; LIVSHITS, M.A.; MATYUSHINA, N.V.; MOROZOV, A.N.; POLUKAROV, D.I.; RAVDEL', P.G.; ROKOTYAN, Ye.S.; SMOLYARENKO, D.A.; SOKOLOV, A.N.; USHKIN, I.N.; SHAPIRO, B.S.; EPSHTEYN, Z.D.; AVRUTSKAYA, R.F., red. izd-va; KARASEV, A.I., tekhn.red.

[Brief handbook on metallurgy, 1960] Kratkii spravochnik metallurga, 1960. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 369 p. (MIRA 13:7)
(Metallurgy)

KOROLEV, A.A.

SHOR, Emmanuil Romanovich. Prinimali uchastiye: GRANOVSKIY, S.P., kand.tekhn. nauk; SON'KIN, M.A., kand.tekhn.nauk; SOLODUKHO, Ya.Yu., inzh.; KOZLOV, B.N.; POLUKHIN, P.I., prof., doktor tekhn.nauk, retsenzent; KOROLEV, A.A., red.; OZERETSKAYA, A.L., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[New rolling mill processes] Novye protsessy prokatki. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 385 p. (MIRA 13:1)

1. Gosudarstvennyy proyektnyy institut Tyazhpromelektroproyekt (for Solodukho).
(Rolling (Metalwork))

KOROLEV, A. A.

25(1,2) PHASE I BOOK EXPLOITATION SOV/4549

Polukhin, Petr Ivanovich, Naum Maksimovich Fedosov, Andrey Andreyevich Korolev, and Yuriy Mikhaylovich Matveyev

Prokatnoye proizvodstvo (Manufacture of Rolled Products) Moscow, Metallurgizdat, 1960. 966 p. Errata slip inserted. 10,500 copies printed.

Ed.: N.P. Gromov; Ed. of Publishing House: V.M. Gorobinchenko; Tech. Ed.: L.V. Dobuzhinskaya.

PURPOSE: This textbook is intended for students of schools of higher education for use in the course "Pressworking of Metals." It will also be helpful to technical personnel in the metallurgical and machine-building industries.

COVERAGE: The book deals with processing techniques, roll pass design, and equipment of mills used in the production of various rolled products. The authors give methods for designing basic parameters of rolling processes and rolling equipment. The following personalities are mentioned: G.K. Laur, Deputy Chief Engineer of the Magnitogorskiy metallurgicheskiy kombinat imeni I.V. Stalina (Magnitogorsk Metallurgical Combine imeni I.V. Stalin); N.P. Gromov, Docent, Candidate of Technical Sciences (who reviewed the manuscript); Ya. L. Vatkin; and the members of the

Card 1/12

Department of Rolling of the Moskovskiy institut stali imeni I.V. Stalina (Moscow Institute of Steel imeni I.V. Stalin). Also cited are textbooks on rolling used by students in schools of higher technical education. There are 161 references, all Soviet.

TABLE OF CONTENTS:

Card 2/12

S/122/60/000/004/002/014
A161/A130

AUTHOR: Korolev, A.A., Candidate of Technical Sciences

TITLE: Calculating metal pressure on rolls with higher accuracy

PERIODICAL: Vestnik mashinostroyeniya, no. 4, 1960, 14 - 19

TEXT: Determination of metal pressure on rolls and of the corresponding torque to be transmitted by the rolls drive to the rolls are the first problem for rolling mill designers. The existing calculation methods and formulae are based on the Karman theory and their accuracy is not sufficient. The system is analyzed graphically and mathematically and a metal pressure formula is derived. The analysis takes into account the nonuniformity of metal flow speed and the derivations apply more to hot rolling than to cold, and on rough rolls. The derivation is simplified by the assumption of metal "sticking" to the roll on the entire A - B arc and the outline of the horizontal metal velocity epures taking parabolic. The derived mean specific pressure formula is

$$p_{cp} = p_0 + \frac{k}{2}\left[\frac{2}{3} + \frac{2-\alpha}{\alpha} - A\left(1 - \frac{1-\epsilon}{\epsilon}\ln\frac{1}{1-\epsilon}\right)\right] \qquad (23)$$

This formula is brought into a simpler form by using only three first terms in

Card 1/3

Calculating metal pressure ...

logarithmic expansion in series. In this way

$$\frac{1-\varepsilon}{\varepsilon}\ln\frac{1}{1-\varepsilon} \approx 1-\frac{\varepsilon}{2}$$

and

$$p_{cp} = p_o + \frac{k}{2}\left(\frac{2}{3}+\frac{2-\alpha}{\alpha}-A\frac{\varepsilon}{2}\right), \quad (24)$$

or, after substituting the value of the A-factor and $\frac{\varepsilon}{\alpha}=\frac{\varepsilon}{\Delta h}=\frac{1}{h_o}$,

$$p_{cp} = p_o + \frac{k}{2}\left[\frac{2}{3}\left(1-\frac{9}{4}\varepsilon\right)+\frac{1}{h_o}\right]. \quad (25)$$

At mean values of $\varepsilon \approx 0.2$; $\alpha = 0.2 \div 0.4$, and $\frac{1}{h_o} = 1 \div 0.5$, the result (at $p_o \approx k$) is $p_{cp} = (1.7 \div 1.5)\,k$. The following conclusions are made from the formula (25): 1) Stress in metal in the deformation zone is determined by the $\frac{1}{h_o}$ relation and the p_o value. 2) At ε = const, the mean specific pressure rises with increasing $\frac{1}{h}$ relation. I.e., the thicker the metal being rolled, or the smaller the contact length between metal and rolls is, the lower the mean specific pressure will be. As

$$\frac{1}{h_o}=\frac{\varepsilon}{\alpha}=\varepsilon\sqrt{\frac{R}{\Delta h}}=\frac{\varepsilon}{\sqrt{\varepsilon}}\sqrt{\frac{R}{h_o}},$$

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Calculating metal pressure ...

reducing of the $\frac{1}{h_o}$ and mean specific pressure at ε = const is only possible by increasing the nip angle, i.e., either by increasing the metal thickness (at l = const), or by decreasing the rolls diameter. 3) at $\frac{1}{h_o}=\frac{\varepsilon}{\alpha}$ = const, the mean specific pressure reduces with increasing relative reduction. The nip angle must also increase, and this is only possible by decreasing the roll diameter. Symbols: α - nip angle; p_o - pressure on the contact surface at the entrance into space between rolls; p_{cp} - mean specific metal pressure; h_o - metal thickness at entrance; k - forced yield limit of metal ($\approx 1.15\,\sigma_s$); l - contact length projection; R - the roll radius.

$$A=\frac{2+\alpha}{\alpha}+2\,\frac{2-\alpha}{\alpha}\cdot\frac{1-\varepsilon}{\varepsilon}.$$

There is 1 figure and 5 Soviet-bloc references.

Card 3/3

KOROLEV, A.A.

Determining the pressure of metal on the rolls in hot rolling. Izv. vys. ucheb. zav.; chern. met. no.8:59-67 '60.
(MIRA 13:9)

1. Moskovskiy vecherniy metallurgicheskiy institut.
(Rolling (Metalwork))

20245

1.1300 also 1496, 1454

S/148/60/000/010/008/018
A161/A030

AUTHOR: Korolev, A.A.

TITLE: Accurate Method for the Determination of Metal Pressure on Rolls in Hot and Cold Rolling

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, 1960, No. 10, pp 96 - 105

TEXT: The Karman (Russian transliteration) theory does not meet the modern conceptions of non-uniform metal deformation in rolling and the function of tangential stresses, thus many scientists are working on a new theory (Ref. 1 - 7). The problem of the determination of metal pressure is discussed in this article in approximate accordance with the new theory, using a generalized schematic diagram (Fig. 1). The principles of the calculations are: that no purely hot (full gathering) or purely cold (full slip over the entire slip arc) rolling conditions exist, and there are two end zones where rolls slip on metal, and a center zone (right and left from the neutral section) of gathering, i.e., without a mutual slip between the rolls and the metal; in hot rolling this center zone of dropping tangential contact stresses occupies the larger portion of the grip arc, and in cold rolling the smaller. Formulas for calculating the mean pressure are evolved for

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S/148/60/000/010/008/018
A161/A030

Accurate Method for the Determination of Metal Pressure on Rolls in Hot and Cold Rolling

the case of cold rolling with tension (33) and for both hot and cold rolling without tension (34). Two graphs are suggested (Fig. 2a and b) expressing the relation of the center zone length coefficient, the $\delta = \frac{\mu}{\alpha}$, and the $\frac{l}{h_2}$ ratio. (see Fig. 1). The work hardening of metal under deformation and the speed of deformation were not considered in evolving the formulas (3) and (4) (the known A.I. Tselikov formulas (Ref. 1) for the specific pressure distribution in the lag zone A-C and in the lead zone B-D), and (21). It is pointed out that in hot rolling the metal pressure on rolls must be calculated taking into account the vibration of the metal yield limit with deformation speed at a given temperature. There are 2 figures and 7 Soviet references.

ASSOCIATION: Moskovskiy vecherniy metallurgicheskiy institut (Moscow Metallurgical Evening Institute)

SUBMITTED: June 26, 1959

Figure 1:

a - Schematic diagram of stressed state in metal; b - Epure of tangential contact stresses; c - Epure of specific pressure of metal on the rolls.

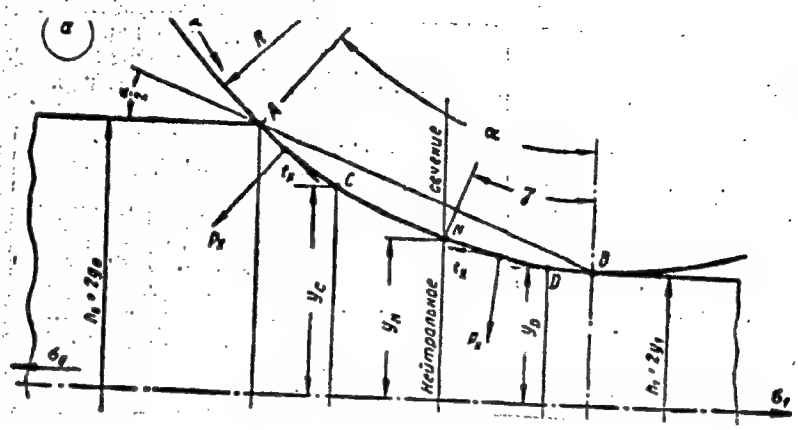

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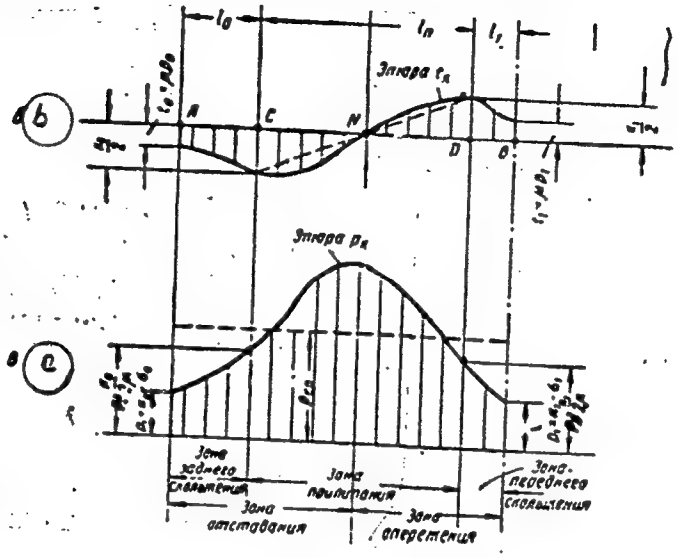
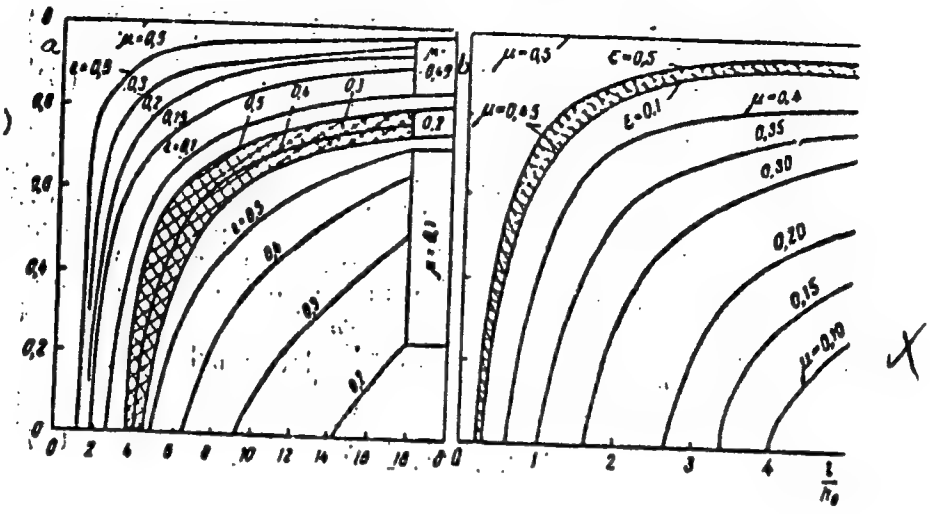
Figure 1 cont'd.



Card 4/5

Accurate Method for the Determination of Metal ...

Figure 2:



Dependence of the gathering zone length on the δ (σ) coefficient and $\frac{l}{nb}$ relation (σ), at different μ and ε values.

Card 5/5

LEDKOV, Vyacheslav Georgiyevich; KOROLEV, A.A., red.; BERLIN, Ye.N., red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Continuous pickling lines] Nepreryvnye travil'nye linii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 158 p. (MIRA 14:11)

(Metals—Pickling)

SEMENKO, Yuriy Lukich; KOROLEV, A.A., kand. tekhn. nauk, retsenzent; BYKOV, V.A., inzh., retsenzent; SMIRNOV, V.V., kand. tekhn. nauk, dots., red.; GOLYATKINA, A.G., red. izd-va; KLEYNMAN, M.R., tekhn. red.

[Machines for the straightening of rolled products] Mashiny dlia pravki prokata. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 207 p. (MIRA 14:11)
(Rolling mills—Equipment and supplies)

KOROLEV, A.A., kand.tekhn.nauk

"Industrial investigation of modern roughing mills" by G.Miuller, V.Liuega, V. Niurnberg. Reviewed by A.A. Korolev. Stal' 21 no. 4:345 Ap '61. (MIRA 14:4)

(Rolling mills)

(Miuller, G.) (Liuega, V.) (Niurnberg, V.)

KOROLEV, A.A., prof.

Pressure due to the upsetting of metals considering the presence of a medium area of hindered deformation and the influence of internal tangential stresses. Izv.vys.ucheb.zav.; mashinostr. no.10:143-149 '61. (MIRA 14:12)

1. Moskovskiy vecherniy metallurgicheskiy institut.
(Strains and stresses)

KOROLEV, A.A., prof.

Effect of tangential stresses in metals on pressure due to plastic deformation between parallel dies. Izv.vys.ucheb.zav.; mashinostr. no.8:147-162 '61. (MIRA 15:1)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.
(Strains and stresses) (Forging)

S/133/62/000/011/003/005
A054/A127

AUTHORS: Korolev, A.A., Nosal', V.V., Professors

TITLE: Improving the structure of rolling and tube mills in the USSR

PERIODICAL: Stal', no. 11, 1962, 1025 - 1034 (1030-1034)

TEXT: The article describes the latest types of strip mills (for hot and cold rolling) and of mills producing seamless and welded tubes. The main tendency is overall automation of the rolling process, using program-control (by means of punched cards), including non-contact gauging instruments for controlling the thickness and width of the strip (on hot rolling mills). The 2500 MMK (2500MMK) type hot rolling mill for wide strips (designed by the NKMZ) is said to be the largest of its kind in Europe. It has 12 stands, and rolls 2,500 x 1,500 x 1,500 mm slabs (15 tons in weight) to sheets up to 2,350 mm wide and 1.5 - 10 mm thick. Its rolling speed is 15 m/sec and annual output 3.4 - 3.6 million tons. On continuously operated 5- and 6-stand cold rolling mills speeds of 30 - 40 m/sec can be attained. 12- and 20-stand cold rolling mills (with rolls 8 - 50 mm in diameter) are being designed for high-carbon and stainless steels to produce strips 0.003 - 0.1 mm thick at reductions of 40 - 50% during rolling and of 95 - 98%

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between annealings. Among the mills for hot rolling seamless tubes a description is given of the 30-102-type (designed by VNIITMETMASh and EZTM, and tested at PNTZ) which operates with a long mandrel and high-speed continuous reducing stand. Special features of this stand are the continuous cutting of the hot rods into predetermined lengths, controlled by computers, and a device for pushing the tubes from the mill into the cooler. VNIITMETMASh also designed mills for tubes having very thin walls ($\delta/D < 0.01$). In the field of welded tube production promising structures have been designed by VNIIMETMASh for the Severskiy metallurgicheskiy zavod (Severskiy Metallurgical Plant) applying welding currents of 150 cps and of radiofrequency (425.000 cps) and attaining welding rates of 70 m/min. In reference to the results obtained by the Moskovskiy trubnyy zavod (Moscow Tube Plant) with radiofrequency welding, the Nauchno-issledovatel'skiy institut tokov vysokoy chastoty im.V.P. Vologdina (Scientific Research Institute of High-frequency Currents im.V.P. Vologdin) is designing the several types of tube welding mills to radiofrequency resistance welding and induction welding. To promote the production of thin-walled tubes VNIIMETMASh designed a special deburring device which is being tested at the Moscow Tube Plant. Special mills are being designed for large-diameter gas tubes (529 - 1020 mm), producing a spiral seam on two sides of

the tube. These mills operate continuously and fully automatically through the application of a special butt-welding machine and looping device. At present a device is under construction for the automatic control of the gap in the welding zone. With this device the overall automation of the tube production process will be made possible. Tests are being carried out to study the radiofrequency welding of spiral seam tubes. There are 3 figures.

Rolling Industry; Handbook SOV/5985

Engineer; O. P. Solov'yev, Engineer; M. A. Sidorkevich, Engineer; Ye. M. Tret'yakov, Engineer; I. S. Trishevskiy, Candidate of Technical Sciences; G. N. Khonkin, Engineer; and A. I. Tselikov, Corresponding Member, Academy of Sciences USSR. Introduction: A. I. Tselikov, Corresponding Member, Academy of Sciences USSR; Ye. S. Rokotyan, Doctor of Technical Sciences; and L. S. Al'shevskiy, Candidate of Technical Sciences.

Eds. of Publishing House: V. M. Gorobinchenko, R. M. Golubchik, and V. A. Rymov; Tech. Ed.: L. V. Dobushinskaya.

PURPOSE: This handbook is intended for technical personnel of metallurgical and machine-building plants, scientific research institutes, and planning and design organizations. It may also be useful to students at schools of higher education.

COVERAGE: The fundamentals of plastic deformation of metals are discussed along with the theory of rolling and drawing. Methods of determining the power consumption and the forces in rolling with plane surface or grooved rolls are

Card 2/[illegible]

KOROLEV, A.A.

Tensile stresses in the deformation zone during rolling.
Izv. vys. ucheb. zav.; chern. met. 5 no.10:59-66 '62.
(MIRA 15:11)

1. Moskovskiy vecherniy metallurgicheskiy institut.
(Rolling (Metalwork)) (Strains and stresses)

KOROLEV, A.A., prof.; NOSAL', V.V., prof.

Improved design of U.S.S.R. rolling and pipe mills. Stal' 22 no.11:1025-1034 N '62. (MIRA 15:11)
(Rolling mills) (Pipe mills)

KOROLEV, A.A., prof.

Calculation of prestressed rolling mill stands. Stal' 22 no.6: 527-531 Je '62. (MIRA 16:7)

(Rolling mills)

KOROLEV, A.A.

Determining the strain of metal deformation in rolling. Izv. vys. ucheb. zav.; chern. met. 6 no.3:121-131 '63. (MIRA 16:5)

1. Moskovskiy vechernyy metallurgicheskiy institut.
(Rolling (Metalwork)) (Deformations (Mechanics))

KOROLEV, A.A., prof.

Effect of external tension on the force required in rolling.
Stal' 23 no.8:728-731 Ag '63. (MIRA 16:9)

1. Moskovskiy vecherniy metallurgicheskiy institut.
(Rolling (Metalwork))

KOROLEV, A.A., prof.

Curvature of the diagram of specific pressure distribution in the sticking area in metal rolling. Izv.vys.ucheb.zav.; mashinostr. no.8:219-225 '63. (MIRA 16:11)

1. Moskovskiy vecherniy metallurgicheskiy institut.

KOROLEV, A.A., prof.

Graphic determination of pressure on the rolls, length of the deformation zone, and the minimum strip thickness in cold rolling. Stal' 23 no.12: 1095-1099 D '63. (MIRA 17:2)

KOROLEV, Andrey Andreyevich; GOLYATKINA, A.G., red.izd-va; DOBUZHINSKAYA, L.V., tekhn. red.

[Rolling mills and equipment of rolling-mill shops; an atlas] Prokatnye stany i oborudovanie prokatnykh tsekhov; atlas. Moskva, Metallurgizdat, 1963. 219 p. (MIRA 17:4)

KOROLEV, A.A.

Correlation between elastic deformations of the rolls and the housings of two-high rolling mill stands. Izv. vys. ucheb. zav.; chern. met. 6 no.11:93-100 '63. (MIRA 17:3)

1. Moskovskiy vecherniy metallurgicheskiy institut.

PAVLOV, I.M.; KOROLEV, A.A.; ILKA IOAN; CHERNYSHEV, V.N.

Device for the investigating of the asymmetrical process of longitudinal rolling. Izv. vys. ucheb. zav.; chern. met. 7 no.11:105-111 '64. (MIRA 17:12)

1. Moskovskiy institut stali i splavov.

KOSHKA, Aleksey Petrovich; BRINZA, Vladimir Nikolayevich;
KOROLEV, A.A., prof., retsenzent;

[Equipment of cold rolling mills] Oborudovanie tsekhov kholodnoi prokatki. Moskva, Izd-vo "Metallurgiia," 1964. 208 p. (MIRA 17:5)

KOROLEV, A.A., prof.

Theoretical determination of the area of strained deformation caused by metal upsetting between inclined plates and by rolling. Izv. vys. ucheb. zav.; mashinostr. no.12:178-181 '64. (MIRA 18:3)

1. Moskovskiy vechernyy metallurgicheskiy institut.

ACC NR: AR6022389 (N) SOURCE CODE: UR/0397/65/000/024/0077/0077

AUTHOR: Korolev, A. A.

TITLE: A comparative study of cholinesterase activity of the blood and tissues in organophosphorus compound poisoning

SOURCE: Ref. zh. Farmakologiya. Toksikologiya, Abs. 24.54.619

REF SOURCE: Sb. Khim. faktory vneshn. sredy i ikh gigiyen. znacheniye. M., 1965, 122-123

TOPIC TAGS: enzyme, liver, brain, poison effect, organic phosphorus compound, toxicology

ABSTRACT: A study of cholinesterase in the blood, liver and brain was conducted in warm blooded animals under conditions of acute poisoning with sublethal doses of acetophosphorus (I) and methyl acetophosphorus (II). It was established that animals displayed no visible symptoms of poisoning despite inhibition of cholinesterase activity of the blood by 70 to 75% and of the liver by 80 to 87%; cholinesterase activity of the brain practically did not change. In chronic experiments on rats and guinea pigs prolonged administration of small doses of I and II produced a steady reduction of cholinesterase activity in the blood. Administration of I and II in rats reduced cholinesterase activity of the

Card 1/2 UDC: 615.777/779-099

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824810012-5

ACC NR: AR6022389

liver by 30 to 40%; cholinesterase activity of the brain did not change. (Editor's note: Administration route and doses of I and II are not given in the article). M. Zobolotskaya. [Translation of abstract].

SUB CODE: 06

Card 2/2

L 40166-66

ACC NR: AP6025681

into an eye ring, and an auxiliary canopy placed inside the main canopy (see Fig. 1). To increase reliability and improve operational qualities, the auxiliary canopy in the form of a reversed cone is fastened to the main canopy's internal shroud lines, which are brought into a small eye ring connected to the main eye ring by a central strand. Orig. art. has: 1 figure. [WH]

SUB CODE: 01/ SUBM DATE: 03May65/ ATD PRESS: 5049

Card 2/2

KOROLEV, A.B.

Isolated stenosis of the pulmonary artery; indications and technique of surgical treatment. Uch. trudy GMI no.19:201-205 '65.
(MIRA 18:8)

1. Iz kliniki gospital'noy khirurgii Gor'kovskogo gosudarstvennogo meditsinskogo instituta imeni S.M.Kirova.

KOROLEV, A.F.; BALAKIN, V.M., red.; ULIN, I.I., red.; SAYTANIDI, L.D., tekhn. red.

[New methods in raising swine] Novye priemy soderzhaniia svinei; sbornik statei. Moskva, Izd-vo M-va sel'.khoz.RSFSR, 1960. 179 p. (MIRA 14:12)

(Swine breeding)

CATEGORY : Farm Animals.
Fine Swine.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 12099

AUTHOR : Korolev, A. F.
INST. : -
TITLE : The Pasturage of Pigs on Potato and Sugar Beet Sown Fields.

ORIG. PUB. : Sovkhoznoye proiz-vo, 1958, No 1, 61-63

ABSTRACT : No abstract.

CARD: 1/1

91

KOROLEV, A.F., nauchnyy red.; PROFERANSOVA, N.V., red.;
TOKER, A.M., tekhn. red.

[Mechanization of work on livestock farms] Mekhanizatsiia rabot na zhivotnovodcheskikh fermakh. Moskva, Proftekhizdat 1963. 399 p. (MIRA 16:10)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Krasnov).
(Stock and stockbreeding--Equipment and supplies)
(Farm mechanization)

VANINSKAYA, Antonina Vladimirovna; KOROLEV, Aleksandr Fedorovich; ROZIN, M.A., red.[deceased]

[Practical manual on the mechanization of livestock farms] Praktikum po mekhanizatsii zhivotnovodcheskikh ferm. Moskva, Izd-vo "Kolos," 1965. 222 p. (MIRA 18:3)

KOROLEV, A.I.*

LYSOV, M.I.; KOROLEV, A.I.; YEGOROV, L.A., inzhener, retsenzent; DYBOR, O.V., kandidat tekhnicheskikh nauk, redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor; MODEL', B.I., tekhnicheskiy redaktor

[Methods of testing automobiles and their mechanisms] Metody ispytaniia avtomobilia i ego mekhanizmov. Moskva, Gos. nauchno-tekhn. izdvo mashinostroit. lit-ry. No.4. [Stearing gear] Rulevye upravleniia avtomobilei. 1953. 81 p. [Microfilm] (MLRA 8:2)

1. Russia (1923- U.S.S.R.) Ministerstvo avtomobil'noy i traktornoy promyshlennosti.
(Automobiles--Testing) (Automobiles--Stearing gear)

* KOROLEV, ALEKSANDR IVANOVICH

KOROLEV, Aleksandr Ivanovich, kand. tekhn. nauk, dots.; ILARIONOV, V.A., red.

[Fundamentals of the operation and repair of motor vehicles] Osnovy ekspluatatsii i remonta avtomobilei. Izd.2., perer. i dop. Moskva, Transport, 1964. 386 p.
(MIRA 18:2)

KOROLEV, A. I.

7684. KOROLEV, A. I. -- Organizatsiya truda pomoshchnikov mastera; obsluzhivayushchikh kruglochulochnyye mashiny KAS-22 M., Gizlagprom, 1954. 184 s. s. ill. 23 sm.

SO: Knizhnaya Letopsis', Vol. 7, 1955

KOROLEV, A.I., prof; FODIMAN, I.V., kand.tekhn.nauk

"Main aspects of inventions and the international law covering them." by M.M. Boguslavskii. Reviewed by A.I. Korolev. Khim. prom. no. 6:525-526 S '60. (MIRA 13:11)
(Inventions) (Boguslavskii, M.M.)

KOROLEV, A.I., inzh.

Contactless numerical code transducer using magnetic memory.
Shor.LIIZHT no.161:292-297 '58. (MIRA 11:12)
(Transducers) (Magnetic memory)

SOV/124-59-10-11178

Translation from: Referativnyy zhurnal, Mekhanika, 1959, No. 10, p. 12 (USSR)

AUTHOR: Korolev, A. I.

TITLE: On the Effect of an Asymmetry of the Correction Moments and Friction Forces in the Suspension Bearings of a Directional Gyro on Its Accuracy

PERIODICAL: Tr. Leningr. in-t aviats. priborostr., 1958, No. 19, pp. 18-23

TEXT: The author considers a directional gyro mounted on a horizontal base plate revolving around the vertical axis with a certain angular velocity ω. A correction device is provided for the adjustment of the angle ϑ formed by the self-rotation axis of the gyro with the base-plate plane. Investigated are: a) the effect of asymmetry of the correction moment under the assumption that the correction is characterized by hysteresis; b) the effect of asymmetry of the friction moments within the suspension bearings. The corresponding computation formulae are given, which show that the asymmetries of correction moments and friction cause additional drifts of the gyro in azimuth. Some experimental data are cited.

V. N. Koshlyakov

Card 1/1

PHASE I BOOK EXPLOITATION 1001

Opyt ekspluatatsii vysokovol'tnykh setey Mosenergo' sbornik statey (Operating Experience of the Mosenergo High-voltage Networks, Collection of Articles) Moscow, Gosenergoizdat, 1957, 79 p. 4,000 copies printed.

Gen. Ed.: Klement'yev, D.P., and Baumshteyn, I.A.; Ed.: Alekseyev, S.V.; Tech. Ed.: Medvedev, L.Ya.

PURPOSE: This collection of articles is intended for engineers and technicians engaged in the operation and repair of high-voltage equipment of power systems. It may also be useful to designers of H-V installations.

COVERAGE: The reports are the result of experience gained in the operation, preventive maintenance, repair and development of electrical equipment in substations and H-V networks. They also contain the first account of the application of telemechanics in network regions of Mosenergo (Moscow Regional Power System Administration). There are no references.

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Operating Experience (Cont.)

Card 3/7

Operating Experience (Cont.)

Card 4/7

VLODAVSKIY, Moisey Il'ich [deceased]; LEONOV, A.A., inzh., retsenzent; Prinimali uchastiye: SVERDLICHENKO, D.Ya., dots.; KOROLEV, A.I., assistent; BOBROVA, Ye.N., tekhn. red.

[Automatic locomotive signaling and automatic stop] Avtomaticheskaia lokomotivnaia signalizatsiia i avtostopy. 2. perer. i dop. Izd. Moskva, Vses.izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 171 p. (MIRA 14:12)
(Railroads--Automatic train control)

S/182/61/000/009/003/005
D038/D112

AUTHORS: Ivakin, I.Ya. and Korolev, A.I.

TITLE: V-shaped inserts increase the durability of cold heading tools

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 9, 1961, 14-16

TEXT: The authors state that by using the construction principle of a V-shaped insert, described by R.V. Mil'vitskiy (Ref. 1: O raschete tolsto-stennykh tsilindricheskikh sosudov [On the calculation of thick-walled cylindrical vessels], "Khimicheskoye mashinostroyeniye", no. 1 (31), 1938), and by M.G. Gonikberg, D.S. Tsiklis and A.A. Opekunov (Ref. 2: K voprosu ob uprochnenii sosudov vysokogo davleniya [Contribution to the problem of reinforcing high-pressure vessels], Doklady Akademii nauk SSSR, t. 129, no. 1, 1959), it was possible to design reliable and durable equipment for the cold heading of metalware, i.e. 10-12 mm diam. bolts. Hard alloy or high-quality chilled steel inserts consisting of separate ground-in wedges were pressed in to the rim of the die or punch. The new design completely eliminated the tensile and annular stress effect since the radial and

Card 1/2

SUSLOV, V.F.; NOZDRYUKHIN, V.K.; KOROLEV, A.I.; RACHKULIK, V.I.; AVSYUK, G.A., otv. red.; PERVAKOV, I.L., red.; CHERNYKH, M.P., mlad. red.; VILENSKAYA, E.N., tekhn. red.

[Drifting above the clouds; documentary narrative] Zaoblachnaia dreifuiushchaia; dokumental'naia povest'. Moskva, Gos. izd-vo geogr. lit-ry, 1961. 252 p. (MIRA 14:11)

1. Chlen-korrespondent AN SSSR (for Avsyuk).
(Fedchenko Glacier) (Glaciological research)